I. Introduction

Background on Resolve 029, description of the process, who was invited, who participated.

II. Summary of existing Public Water Supply Protection

A. Resolve 029 findings on state policies and laws

B. Gaps in the protection strategy

III. Options for Improving Public Water Supply Protection

A. State Policy Refinement

All state agencies consider public water supply protection in their actions and decisions. Choices on level of the statement (e.g., executive order, law, other), mechanisms for implementation

B. Encouragement of Low Intensity Land Use in protection areas

Provide assistance and incentives to encourage low-impact recreational, forestry, and agricultural uses in public water supply protection areas. We have choices on formality of program refinements, funding options. Some parts of protection areas can have multiple uses and still conserve water quality and quantity

C. Specific program refinements

1. Statewide

DEP Site location and NRPA review and enforcement to explicitly include public water supplies (several variations to consider).

2. Local Implementation

Three options to consider:
-Amend PL 761 (PWS notified as an abutter of activities in their protection area) to require acknowledgement of notice before a permit can be issued.
-Require developments to acknowledge their potential for impact on water supplies as part of the permitting process.
-Require municipalities to adopt minimum water supply protection zoning (both well and intake protection).

From the Resolve:

Recommendation 1: Establish consistent policies among all State agencies to enhance source protection in all state decision making, development, and practices.

A number of state agencies have authority over activities that can either enhance or detract from protection of public water supplies. In many cases, public water supply protection is not part of the framework for site selection and permitting decisions. The Maine DWP should provide leadership and coordination for decisions that may influence source protection. Agencies that can assist source protection include:

- Department of Conservation: shoreland and boat launch development, park water supply development, forest management assistance and enforcement prioritization in source water protection areas.
- Inland Fisheries and Wildlife: surface use management of water supply lakes, boat launch development and management, wildlife area management, hatchery management.
- Department of Environmental Protection: shoreland zoning review, Natural Resources Protection Act permitting, enforcement prioritization in source protection areas. Spill response and clean-up and siting of new UST's are good models of how source protection areas can be prioritized in environmental activities.
- Department of Agriculture: prioritization of enforcement, technical and financial assistance activities when correcting environmental problems to give greater priority to source protection areas.
- State Planning Office: assistance to local entities with source protection land use planning, comprehensive plan and ordinance review.
- Land for Maine's Future Board: assistance with protection of open space; protection of water supplies currently not a criterion for conservation.

Proposed Implementing Language:

WHEREAS, the citizens of the State of Maine have invested significant resources in the development of public water supplies for towns and cities within the State, and

WHEREAS, a safe, abundant, and well-protected supply of drinking water is essential for the public health and economic viability of the State, and

WHEREAS, water supply protection provides major economic and social benefits to the People of Maine, by conserving open space and increasing the security of our resources, and

WHEREAS, the decisions of many state agencies can either foster or threaten public water supply protection, and

WHEREAS, water supply protection is not officially considered in many state decisions,

THEREFORE, we find and declare that all state agencies shall explicitly consider the impact of their actions on public water supplies, and document the impacts and prescribe or conduct any appropriate mitigation of impacts on the water supply resulting from the activity.

Questions to be answered:

- What level of documentation and mitigation is appropriate?
- Means of implementation (MOU's, new regulations, executive order)
- Protection of future locations for Public Water Supply
- Details of implementation will be developed by agreement among the agencies?

From the Resolve:

Recommendation 2: Create an effective program to maintain agricultural and forestry land uses in source protection areas.
National research shows that well-managed forestry and agricultural uses help maintain water quality and availability. Many source protection areas are currently being converted from forestry and agricultural uses to residential and commercial development. These more intensive land uses, also known as "sprawl" pose greater risks to water quality, and often reduce the availability of both ground and surface waters by altering the hydrology of the area.
2.1 Existing programs (e.g., Nutrient Management, Right to Farm, Sustainable Forestry) to maintain environmentally responsible agricultural and forestry uses should be provided with resources and given a focus to work in source protection areas to encourage land conservation.

2.2 Provide resources and direction to Agricultural and Forestry programs including nutrient management, sustainable forestry, and right to farm to work with landowners in source protection areas to minimize the impact of their activities.

Although agricultural and forestry land uses represent the lowest level of threat to water quality, poor management can lead to a variety of problems, ranging from erosion and sedimentation to hydrocarbon and pesticide contamination of ground and surface waters. A combination of landowner education, conservation incentives, and, where needed, enforcement can significantly reduce these risks.

Possible implementation:
-amend right to farm, manure management and related legislation to focus resources on farms in public water supply protection areas (PWSPA) or, can we do this administratively through an MOU under recommendation #1?
-focus agricultural and forestry land owner assistance in PWSPA's: can we use targeted federal resources, or request funding for additional technical assistance in areas like green certification?
-encourage land conservation in low-intensity recreational (*as suggested),* forestry and agricultural uses in PWSPA through Land for Maine's future and other programs. Amend LMF to allow purchase of land/easements where public water supply protection and other LMF goals are congruent (*as suggested).*
-Provide a dedicated bond-based fund (*as recommended by the group)* to match a portion of the cost of land and easements acquisition to conserve lands in forestry, farmland, or low intensity recreation for water supply protection. The program could be administered by LMF or by the DWP land acquisition loan program (both existing authorizations).
-Integrate PWS efforts with land trusts and private conservation.

From the Resolve:

Recommendation 3: Mitigate the effects of existing and new development on drinking water quality through the use of education, incentives and enforcement.

Statewide activities:

3.1: Encourage active management (BMP's) of existing potentially threatening uses in source protection areas through municipal, PWS and state inspection of activities.
3.2 Develop a plan to target enforcement of existing environmental laws in source protection areas.
3.3 Add proximity to public water supplies as a review criterion for Environmental review programs, particularly NRPA and Site Location.

A number of public water supplies are located in relatively developed areas. It is not realistic to expect that businesses and residences will leave a source protection area. It is possible, through the use of education, incentives, and enforcement to mitigate the impact these activities have on water quality.
Maine has a strong array of environmental laws. We also have limited resources to enforce these laws. Programs like Pollution Prevention, Resource Conservation and Recovery Act and Underground Storage Tank inspection, Site Location, and Natural Resources Protection Act (NRPA) enforcement all can assist in reducing risks to public water supplies as well as helping maintain general environmental quality. Source protection areas should be identified on NRPA and Site Location applications, and minimizing the impact of development on water supplies should be an explicit review item under these laws. Focusing the energy in programs like these, as well as agricultural and forestry education and enforcement can reduce risks to public health.

Possible Implementation:

1. Areas within 1,000 feet of the intakes of public surface water intakes may be zoned resource protection based on proximity to the intake. (regulation change, Shoreland Zoning)
2. Public water supplies are declared a protected natural resource under NRPA (legislation required)
3. Explicitly consider public water supply locations in Site Location and NRPA permitting and enforcement. (could be either legislation or MOU)
4. Consider future public water supply locations (as identified by PWS, MGS?) in Site Location and NRPA permitting and enforcement.

From the Resolve:

Local Government activities:

3.4 Set minimum standards for local source protection ordinances.

3.5 Amend PL 761 to require that a PWS's written response to notification of proposed changes in land use activities in source protection areas be required prior to approval of a local permit. Make the adoption of ordinances meeting or exceeding state standards a municipal requirement, using an approach similar to shoreland zoning. Only 21% of all community public water supplies have effective land use controls on their source protection area. These systems serve a large portion of the PWS population (about 60%), but smaller systems have been unable to work successfully with local officials to develop and implement local protection plans. The DWP and its partners have been working with systems and towns for more than 15 years to encourage the adoption of local ordinances with outreach, small grants, technical assistance and model ordinances. Standards should be simple and risk-based.

For ground water sources, a small inner zone would have no new contaminant sources allowed and high levels of management at existing sources. A larger outer zone would require a review of risks associated with proposed development, and would encourage open-space conserving uses, like agriculture and forestry.

For surface water sources, the inner zone would be a part of shoreland zoning, and would include surface use restrictions near the intake, as well as resource protection zoning near the intake. For the watershed, a preference for sustainable agricultural and forestry uses and risk-based review standards for new development would be key components.

Although PWS's are nominally required to be notified of permit applications in source protection areas under PL 761, this provision has not been widely followed by local government. If a written response from the PWS was always a part of the record when the permit was processed, we could be sure that the PWS had been notified and had the opportunity to participate in the process. In many cases, the response might be that the PWS saw no threat in the change in land use. Even if the PWS intervened in the process, the decision would still lie with the local government.

Implementation Options (choose one or more?)

1. Amend PL 761 as noted above
2. Require written acknowledgement from permit applicants that they are developing in a source protection area. *Note: recommendation from the group*
3. Develop and require adoption of minimum source protection zoning at the local level, as described below.

Provide protection for 950 Community and Non-Community Non-Transient Wells (324 Community Systems and 370 NTNC systems). *Note: this represents about 1/3 of the public ground water supplies, and serves the largest and most sensitive populations: schools, hospitals, nursing homes, for example. This refinement is based on feedback from the group.*
Also consider: 50 surface water supplies through shoreland zoning refinement.

Source protection ordinance definitions and standards:
PWS wells have at least two zones: a primary protection zone of either a calculated fixed radius or flow-modeled area, and a secondary zone similarly calculated where risks are lower but still significant. Maine DWP has provided all towns with maps showing these zones for all PWS wells. The current proposal includes a sub-set of PWS wells, where large numbers of individuals and sensitive populations are at risk.
PWS intakes have three zones: an intake zone of 1,000 feet around the intake, the shoreland zone around the water body (250 feet, to parallel shoreland zoning) and the watershed of the water body. Maine DWP has provided all towns with maps showing the zones for all PWS wells and intakes. The current proposal would influence zoning and review within the shoreland zone.
Acute contaminants: nitrate, bacteria, produced by septic systems, animal husbandry, manure spreading, other fecal waste disposal.
Chronic contaminants: metals, organics, pesticides and related substances regulated by the Safe Drinking Water Act that are associated with residential, commercial, industrial, and some agricultural land uses.

-no new activities that produce acute (nitrate, bacteria) or chronic contaminants are permitted within the primary protection zone. Existing activities shall use applicable Best Management Practices and may be subject to monitoring and inspection. (note: ideally, the water supplier should own or control this zone).

-any development in the secondary zone is subject to a 'no adverse impact on water quality or quantity' review by the planning board. Industrial/commercial uses may be restricted or conditioned on use of BMP's for handling of toxic materials. DWP has developed a BMP manual for these zones.
-Zoning shall encourage the retention of lands in low intensity forestry and agricultural uses. (*recommendation from the group*)